

REMARKS

The Examiner's Action mailed on June 13, 2006, has been received and its contents carefully considered. Additionally attached to this Amendment is a Petition for a One-month Extension of Time, extending the period for response to October 13, 2006.

In this Amendment, Applicant has amended independent claim 31, canceled claims 1-30 and 37, and added claims 39-47. Claims 31, 44 and 46 are the independent claims. For at least the following reasons, it is submitted that this application is in condition for allowance.

Initially, Applicant would like to take this opportunity to thank the Examiner for granting the interview conducted on September 11, 2006. During this interview, Applicant was given the opportunity to present amended claims and new claims, which are believed to distinguish over the art of record. The Examiner's attention is directed to the fact that the claims presented with this Amendment correspond to those presented to the Examiner on September 11, 2006, with the exception that claim 31 has now also been amended to include the subject matter of dependent claim 37, which claim has been canceled.

As discussed during the interview, this Amendment renders all of the Examiner's rejections moot, with the exception of the rejection that was applied against claims 31-38, which rejection relied on the combination of *Shibamoto et al.* (US patent publication number 2002/0105070) in view of *Baba* (USP 6,046,077). As further discussed during the interview, Applicant's independent claim 31 is

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prima facie patentably distinguishable over the cited combination of references for at least the following reasons.

The Examiner's Action has relied on the embodiment shown in Figure 15 of *Shibamoto et al.* as basically teaching Applicant's invention recited within independent claim 31. The Examiner also relies on the teachings of *Baba* as disclosing an insulating substrate. It was the Examiner's contention that the embodiment shown in Figure 15 could be disposed over a substrate, as recited by Applicant's independent claim 31.

As discussed with the Examiner during the interview, Figure 15 of *Shibamoto et al.* teaches a semiconductor chip 1 being disposed over a sealing resin 8. This reference also discloses placing a heat sink 4 over the semiconductor chip 1 and over the sealing resin 8. Wirings 10 are used to connect the semiconductor chip 1 to solder bumps 7. The Examiner's Action had equated a portion of the sealing resin 8 as being a protective film, such as recited by Applicant's independent claim 31, and a further portion of the sealing resin 8 as being the sealing resin that is also recited within Applicant's independent claim 31. However, Applicant's claim 31 now recites that the protective film is a solder resist. Although the Examiner's Action, in rejecting original claim 37, contended that the reference discloses that the sealing resin 8 was a solder resist, Applicant has not been able to find any such disclosure to support this contention. Instead, the sealing resin 8 is disclosed as being a material such as a phenolic sealing resin, a polyamide sealing resin or an epoxy sealing resin. Although the reference

does utilize the term "solder", this term is only used in defining the composition of the bumps 7, which are solder bumps. The solder bumps 7 do not form a protective film as recited by claim 31.

Furthermore, and as discussed during the interview, there is no disclosure or suggestion from this reference that the sealing resin 8 is in direct contact with a substrate, as recited by claim 31. It is noted that if the embodiment shown in Figure 15 were placed upon a substrate, as suggested by the Examiner's Action, then the sealing resin 8 would be separated from the substrate by the presence of the solder bumps 7. As such, it is respectfully submitted that Applicant's independent claim 31, and the claims dependent therefrom, are *prima facie* patentably distinguishable over the cited references.

Moreover, and as also discussed with the Examiner during the interview, claim 44 is submitted to be *prima facie* patentably distinguishable over the cited references at least for the reason that this claim recites that the sealing resin covers the semiconductor chip. In contrast, the cited reference discloses disposing the sealing resin 8 under and adjacent to the semiconductor chip 1, but not over the semiconductor chip, so that the sealing resin 8 does not cover the semiconductor chip 1, as recited by claim 44. It is thus requested that this claim, and the claims dependent therefrom, be allowed.

Furthermore, and as also discussed during the interview with the Examiner, independent claim 46 recites that solder balls are disposed on a lower surface of the substrate, and that the substrate is disposed over the solder balls and under

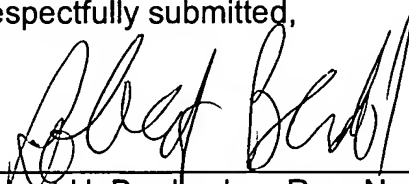
the wiring, the reinforcement layer and semiconductor chip. As noted during the interview, if the embodiment shown in Figure 15 were placed over a substrate, then the solder balls would be disposed on an upper surface of the substrate, with the substrate being disposed under the solder balls, rather than over the solder balls, as recited by this claim. It is thus requested that this claim, and the claims dependent therefrom, be allowed. It is further requested that this rejection be withdrawn.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of this application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Should the remittance be accidentally missing or insufficient, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002, and advise us accordingly.

Respectfully submitted,



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Date

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